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Functional Abdominal Pain and Separation Anxiety: Helping the Child Return to School

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You have just reassured Mrs. Lee that the medical evaluation is normal and that her daughter, Angela, does not have a life threatening disease. You explain that Angela has functional abdominal pain, a condition that causes real pain but does not require activity restriction. In fact, children cope better with functional abdominal pain when they continue their normal activities. You tell the family that Angela may return to school tomorrow.

“But what if my stomach hurts?” Angela asks with obvious distress.

“Should I force her to go to school even if she really hurts?” Mrs. Lee asks.

This scenario is especially common when functional abdominal pain (FAP) co-exists with separation anxiety, a child's extreme fear of potential or actual separation from parents and other attachment figures. In these cases, the pediatrician may see an escalating cycle of

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abdominal pain, emotional distress, and school absence that seems out of proportion to the physical findings.

The goals of this article are to help pediatricians recognize when separation anxiety contributes to the symptoms and disability of FAP; to implement simple strategies to improve outcomes for children with comorbid FAP and separation anxiety; and to know when to refer these cases to a pediatric psychologist.

SEPARATION ANXIETY

Separation anxiety is a normal developmental phenomenon among preschoolers. Separation anxiety disorder (SAD), in contrast, is an anxiety disorder of middle childhood characterized by an exaggerated fear of separation that interferes with developmentally appropriate autonomy. Sidebar 1 (see page 269) lists the *Diagnostic and Statistical Manual of Mental Disorders*, fourth edition¹ diagnostic criteria for SAD. Note that separation anxiety exists on a continuum — children may exhibit symptoms of separation anxiety without meeting the DSM- IV diagnostic criteria.

SIDEBAR 1

DSM-IV Diagnostic Criteria for Separation Anxiety Disorder¹

- A. Developmentally inappropriate and excessive anxiety concerning separation from home or from those to whom the individual is attached, as evidenced by three (or more) of the following:
 1. Recurrent excessive distress when separation from home or major attachment figures occurs or is anticipated;
 2. Persistent and excessive worry about losing, or about possible harm befalling, major attachment figures;
 3. Persistent and excessive worry that an untoward event will lead to separation from a major attachment figure (eg, getting lost or kidnapped);
 4. Persistent reluctance or refusal to go to school or elsewhere because of fear of separation;
 5. Persistent and excessively fearful or reluctant to be alone or without major attachment figures at home or without significant adults in other settings;
 6. Persistent reluctance or refusal to go to sleep without being near a major attachment figure or to sleep away from home;
 7. Repeated nightmares involving the theme of separation; and
 8. Repeated complaints of physical symptoms (such as headaches, stomachaches, nausea, or vomiting) when separation from major attachments figures occurs or is anticipated.
- B. The duration of the disturbance is at least 4 weeks.
- C. The onset is before 18 years.
- D. The disturbance causes clinically significant distress or impairment in social, academic (occupational), or other important areas of functioning.

- E.** The disturbance does not occur exclusively during the course of a Pervasive Developmental Disorder, Schizophrenia, or other Psychotic Disorder and, in adolescents and adults, is not better accounted for by Panic Disorder with Agoraphobia.

Recurrent complaints of physical symptoms are key features of separation anxiety, and are the reason pediatricians frequently see children with SAD in their clinics.

Prevalence

The prevalence of childhood SAD is estimated at 3.2% to 4.1%.^{2,3} The peak onset is in middle childhood, between 7 and 9 years,⁴ about the same period when recurrent abdominal pain has its peak.

Clinical Presentation

Children with separation anxiety typically present in the pediatric clinic with nonspecific physical complaints that have kept them from attending school. Gastrointestinal symptoms — periumbilical abdominal pain, nausea, vomiting — are among the most common complaints associated with SAD and may occur before or during separation. The majority of children see a pediatrician for their physical symptoms long before they see a mental health provider for their anxiety. Indeed, data from a national survey indicate that only one-fifth of children with SAD receive treatment for emotional problems before 18 years.⁵

Although separation anxiety is defined in terms of the child's anxiety, the parents typically also are anxious about separation. Indeed, they may appear as upset as their children when a separation is imminent. Parental anxiety is often expressed as concern about whether the child will be "okay" without them nearby.

Families who bring a child with SAD to the pediatric clinic typically focus on the child's physical complaints and do not recognize the child's anxiety. The child behavior that we attribute to anxiety may be attributed to physical illness by the family. In their view, the child does not attend school because of illness, sleeps with a parent because of illness, and stays close to home because of illness. In the context of their view that the child is acutely ill, keeping the child at home is appropriate and reflects good parenting.

When separation anxiety develops following an acute illness, as is common, it may be difficult to know when child and parent anxiety become a major force driving the child's illness behavior. If the symptoms are exacerbated during the return to school, however, it may be a clue that separation anxiety developed during the period of increased dependency associated with an acute illness and extended school absence.

Risk Factors

Sidebar 2 (see page 269) lists risk factors for childhood SAD. There is some evidence of a genetic contribution to separation anxiety.⁶ A shy, inhibited temperament is also a risk factor for SAD. SAD is associated with lower socioeconomic status,⁴ perhaps because children in families with limited resources have less exposure to separation: their families are less likely to employ non-family caregivers and may not be able to afford activities such as summer camp that foster children's autonomy. Acute situational events increase the risk for onset or exacerbation of separation anxiety. Common precipitating events include losses (move to a new home or school, parent divorce, death of a family member) and stressors (academic challenges, peer relationships). Finally, an overprotective parenting style is a risk factor for SAD as it may reinforce child dependency and fear of separation.

SIDEBAR 2

Risk Factors for Functional Abdominal Pain and Separation Anxiety

Genetic

Family history of anxiety or depression

Child temperament

Behavioral inhibition

Socioeconomic/cultural

Limited exposure to non-family caregivers; limited participation in activities outside the family

Situational

Family move, parent separation/divorce, death of family member, new school

Parent behavior

Overprotection

Course and Prognosis

Results of a prospective community study showed that the majority of children who met diagnostic criteria for SAD were well at follow-up, approximately 18 months later.⁷ No data exist on the clinical course of comorbid FAP and SAD. However, both FAP and SAD may have periodic exacerbations, often during times of increased stress such as the start of a new school year. Both FAP and SAD are associated with depressive disorders and other anxiety disorders including generalized anxiety disorder, panic disorder, and obsessive compulsive disorder.^{4,7,8}

A REHABILITATION APPROACH

Some cases may warrant behavioral health services. However, many cases may resolve with simple interventions by the pediatrician using a rehabilitation approach.

A rehabilitation approach acknowledges that even though a cure for FAP may not be possible, the child's quality of life can be improved significantly. As with any rehabilitation program, functioning typically improves before symptoms resolve. Three major goals guide a rehabilitation approach to children with comorbid FAP and SAD:

- Reduce fear and avoidance of separation;
- Increase child's participation in age-appropriate activities; and
- Redirect attention to child's competent behavior (participating in school activities, helping others) rather than focusing on symptoms.

Below we review strategies consistent with these goals, grouped according to common issues that the pediatrician may confront in caring for children with FAP and SAD.

PRESENTING THE TREATMENT PLAN

Review results of the diagnostic evaluations and be sure that the family has not misinterpreted incidental physical or laboratory findings as clinically significant. Inquire whether the parent has concerns about a particular disease and if so, explain how that

disease has been ruled out and/or why further evaluation is not indicated at this time. Praise the parent for having obtained a thorough medical evaluation that ruled out organic disease. Explain that FAP causes real pain but is diagnosed by symptoms rather than a specific laboratory or radiographic test. Schedule a return appointment and assure the parent that you will evaluate any new or substantially changed symptoms.

Introduce the treatment as a process of rehabilitation. Refer to common examples of rehabilitation, for example, rehabilitation following a sports injury, and explain that rehabilitation begins while people are still experiencing symptoms. This point merits emphasis, as many families assume that symptoms must be resolved before children return to their normal activities.

THE PARENT'S ROLE

Note that the parent's role and mind-set must change. Until now, the parent's job was to protect the child from possible harm while searching for a cause of the pain. Emphasize that the parent's job now is to be a "coach," to encourage and support the child's return to normal activities. Even children with organic disease — such as diabetes or cystic fibrosis — attend school. Parents go to work when they have a headache; children also must learn to function with discomfort if they are to complete their education and hold jobs as adults. Parents should be warm and supportive, encouraging the child, believing in the child even when the child doesn't believe in himself.

INITIAL RETURN TO SCHOOL

Ideally, the child should return to school immediately following a medical evaluation that rules out disease or disorder requiring bedrest. In some cases, however, children and their parents do not have adequate skills to manage the anxiety that would ensue during a day-long separation. These children may do better with a graduated return to school in which they attend for a limited period initially (an hour or a half-day), increasing to full-time attendance over a period of 2 to 3 weeks. The first day back at school should be limited to a period of time, however short, that guarantees child success and boosts child and family confidence in the child's ability to attend school.

Ask the family to display a calendar at home and record the number of hours the child attends school each day. Help the family make a list of special privileges or treats (a special game with the parent, a small trinket) that the child can earn for attending school as scheduled. These rewards should be delivered on the day they are earned, accompanied by warm praise. Plan for special activities when the child reaches important milestones (eg, first full-day back at school, first week without school absence).

HOMEBOUND SCHOOLING

Homebound schooling, where the child receives instruction at home, is contra-indicated for FAP and SAD as it reinforces avoidance of separation, limits opportunities to participate in age-appropriate behavior, and increases attention to the child's symptoms.

In some cases, children may already be enrolled in homebound schooling or the school may ask the pediatrician to approve homebound services so the child can receive help catching up on schoolwork. If homebound cannot be avoided, it should be for a very limited period of time such as several weeks up to one month. A gradual re-entry to school can begin while the child is still on homebound by arranging for the child to attend one or two classes a day or participate in other school activities. Such an arrangement usually requires a letter from the pediatrician.

PAIN EPISODES AT SCHOOL

Anticipation of a pain episode at school can produce anxiety in children that reaches the level of panic. Reduce anticipatory anxiety by working with the family and school to develop a plan for handling pain episodes at school. For example, the school might allow the child to go to the nurse's or counselor's office to rest until the pain subsides. After resting, the child should return to class. Avoid letting pain be a ticket to leave school early as this reinforces pain and undermines the child's learning to cope with pain. Instead, the child should leave school at the scheduled time with praise for successfully coping on his own. However, if signs of acute illness such as fever $> 102^{\circ}$, vomiting, and diarrhea accompany the pain, the child should be allowed to return home.

DIFFICULTY SEPARATING FROM PARENT

In some families, the child and one parent have developed a pattern of morning interaction that escalates distress for both of them. For example, the child may cry and cling to the parent and the parent, in turn, may be overcome with concern for the child, causing the child to become even more distressed and unsure about his/her ability to attend school. If the child has particular difficulty separating from one parent in the morning, involve the other parent in taking the child to school. The parent who previously has been less involved in the morning distress may be more matter-of-fact at the time of separation, implicitly communicating greater confidence in the child's ability to cope at school.

MAKE-UP WORK FOR SCHOOL

Inquire about how much make-up work the child has as a result of school absence. If the volume of make-up work is overwhelming, help the family develop a reasonable schedule for the child to complete the work. The workload will be more manageable if it is scheduled in brief daily sessions that do not prevent the child from enjoying some free time after school. For example, parents may set a timer and let the child take a break after 30 minutes even if the schoolwork is not fully completed. Another 30-minute session can be scheduled later in the evening if necessary, but more than that is counterproductive for many children.

USING THE SCHOOL BATHROOM

Identify the child's concerns about using the school bathroom (lack of privacy, poor sanitation, insufficient time to use the toilet). Write a letter to the school indicating that, for health reasons, the child should be allowed to use the bathroom whenever necessary without waiting for a break. Often, the freedom to use the bathroom as needed reduces children's anxiety, and they only rarely use the bathroom outside regularly scheduled times.

ADVERSARIAL RELATIONSHIP BETWEEN PARENT AND SCHOOL

When schools interpret children's school absence as willful truancy or irresponsible parenting, an adversarial relationship between the school and family may exacerbate the child's anxiety about returning to school. The pediatrician can help repair the relationship by writing a letter to the school confirming that the child has been undergoing evaluation for gastrointestinal symptoms that have interfered with school attendance.

IDENTIFICATION OF SCHOOL STRESSORS

Explore whether any significant threats at school (bullying, social isolation) or inappropriate classroom placement contribute to the child's school refusal. Children often cannot

articulate why they feel bad at school, and often there are no real threats at school; it is just their symptoms of autonomic arousal associated with anxiety.

REDUCING ATTENTION TO SYMPTOMS

Explain to parents that distraction is one of the best strategies for managing pain. Parents can help their children by distracting them with conversation or other activities when they feel pain. If children complain frequently about symptoms, the family can schedule a specific time each day for a 5-minute “symptom report.” At other times, the family can acknowledge a symptom complaint, tell the child to save it for the report, and then redirect the child in another activity. Parents also can help their children with distraction in an indirect way, by not inquiring about their children’s symptoms. For parents who have difficulty not asking their child if they are in pain, ask the parents to only ask once per day, during the “symptom report.”

STAYING HOME FROM SCHOOL

Provide specific guidelines to help parents decide when the child is too sick to go to school (eg, a temperature of 102 ° or higher; repeated vomiting and/or diarrhea with inability to keep down clear liquids; evidence of contagious disease). Emphasize that if the child is too sick to go to school, the child must rest in bed without television or other entertainment such as computer games. If the child feels better before the school day ends, the child may return to school or do schoolwork at home.

MANAGING ANXIETY

Several books have tips for parents and children on managing anxiety and coping with chronic or recurrent pain (see Sidebar 3, page 270). Some families find it helpful to purchase an audio-recording of relaxation instructions or guided imagery that the child can use to help manage pain or anxiety. Mothers who have used breathing exercises during labor understand the value of diaphragmatic breathing to manage pain and anxiety; they may help teach deep breathing to their children.

SIDEBAR 3

Resources for Parents and Children

Culbert T, Kajander R. *Be the Boss of your Pain: Self-care for Kids*. Minneapolis, MN: Free Spirit Publishing; 2007.

Culbert T, Kajander R. *Be the Boss of your Stress: Self-care for kids*. Minneapolis MN: Free Spirit Publishing; 2007.

Huebner D. *What to do When You worry Too Much: A Kid’s Guide to Overcoming Anxiety*. Washington, DC: Magination Press; 2006.

Krane EJ. *Relieve your Child’s Chronic Pain: A Doctor’s Program for Easing Headaches, Abdominal Pain, Fibromyalgia, Juvenile Rheumatoid Arthritis, and more*. New York, NY: Simon & Schuster; 2005.

Miles BS. *Imagine a Rainbow: A Child’s Guide for Soothing Pain*. Washington, DC: Magination Press; 2006.

Rapee RM, Spence SH, Cobham V, Wignall A. *Helping Your Anxious Child: A Step-by-step Guide for Parents*. Oakland, CA: New Harbinger Publications; 2000.

Zeltzer LK. *Conquering your Child's Chronic Pain: a Pediatrician's Guide for Reclaiming a Normal Childhood*. New York, NY: HarperCollins; 2005.

INCREASE AUTONOMY

Identify and support the child's interests and skills outside the sick role. Let the child know you are interested in him or her as a person; for example, ask a child who likes to draw to make a drawing for your office or bring one of her drawings to the next visit. Encourage the parents to involve the child in extracurricular school activities, invite a classmate home, and participate in community classes or organizations for youth.

REFERRAL TO A PEDIATRIC PSYCHOLOGIST

Because of time constraints, it is not always possible for pediatricians to implement effective strategies to help children manage their symptoms and return to their normal level of functioning. The longer children avoid school, however, the more difficult it becomes to return to school and the more stress is generated. Therefore, as soon as it becomes evident that a child's return to school is not progressing and daily functioning is not improving, the pediatrician should refer the child to a pediatric psychologist or other behavioral health provider. Although some families may not regard generic "counseling" as necessary,⁹ most families recognize that worry and stress can exacerbate their children's symptoms. Families are most likely to accept referral to a behavioral health provider that the pediatrician knows and who offers targeted services, such as pain and stress management, which are consistent with the family's view of their child's needs. Finally, it is important for the pediatrician to schedule a follow-up visit to monitor the child's progress and evaluate any new symptoms.

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References

1. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. 4. Washington, DC: American Psychiatric Publishing; 1994.
2. Bowen RC, Offord DR, Boyle MH. The prevalence of overanxious disorder and separation anxiety disorder: Results from the Ontario Child Health Study. *J Am Acad Child Adolesc Psychiatry*. 1990; 29(5):753–758. [PubMed: 2228929]
3. Masi G, Mucci M, Millepiedi S. Separation anxiety disorder in children and adolescents: epidemiology, diagnosis and management. *CNS Drugs*. 2001; 15(2):93–104. [PubMed: 11460893]
4. Last CG, Perrin S, Hersen M, Kazdin AE. DSM-III anxiety disorders in children: Sociodemographic and clinical characteristics. *J Am Acad Child Adolesc Psychiatry*. 1992; 31(6):1070–1076. [PubMed: 1429407]
5. Shear K, Jin R, Ruscio AM, Walters EE, Kessler RC. Prevalence and correlates of estimated DSM-IV child and adult separation anxiety disorder in the National Comorbidity Survey Replication. *Am J Psychiatry*. 2006; 163(6):1074–1083. [PubMed: 16741209]
6. Silove D, Manicavasagar V, O'Connell D, Morris-Yates A. Genetic factors in early separation anxiety: implications for the genesis of adult anxiety disorders. *Acta Psychiatr Scand*. 1995; 92(1): 17–24. [PubMed: 7572243]
7. Foley DL, Pickles A, Maes HM, Silber JL, Eaves LJ. Course and short-term outcomes of separation anxiety disorder in a community sample of twins. *J Am Acad Child Adolesc Psychiatry*. 2004; 43(9):1107–1114. [PubMed: 15322414]
8. Brukl TM, Wittchen HU, Höfler M, Pfister H, Schneider S, Lieb R. Childhood separation anxiety and the risk of subsequent psychopathology: results from a community study. *Psychother Psychosom*. 2007; 76(1):47–56. [PubMed: 17170563]

9. Claar RL, Walker LS. Maternal attributions for the causes and remedies of their children's abdominal pain. *J Pediatr Psychol.* 1999; 24(4):345–354. [PubMed: 10431500]